REMARKS

The present application includes pending claims 1-57, of which claims 13, 26, and 35-57 have been withdrawn from consideration. Claims 1-12, 14-25, and 27-34 have been rejected. By this Amendment, claims 5 and 14 have been amended as set forth above to correct minor typographical errors. The Applicants respectfully submit that the pending claims define allowable subject matter.

Claims 1-5, 7, 8, 10, 12, 14-18, 20, 21, 23, 25, 27-30, and 33 have been rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5,336,399 ("Kajisono"). Claims 6, 19, and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kajisono in view of Official Notice. Claims 9, 22, and 32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kajisono in view of United States Patent No. 4,166,086 ("Wright"). Claims 11, 24. and 34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kajisono in view of United States Patent No. 3,836,130 ("Earhart"). The Applicants respectfully traverse these rejections at least for the reasons set forth below.

The Applicants first turn to the rejection of claims 1-5, 7, 8, 10, 12, 14-18, 20, 21, 23, 25, 27-30, and 33 as being anticipated by Kajisono. Kajisono discloses an "apparatus for purifying and activating water." Kajisono at Abstract. The apparatus includes a capsule secured to an end of a drive shaft. *See id.* The capsule includes a plurality of "small apertures." *See id.*

Kajisono "relates to an apparatus for purifying and activating water by effectively retaining air in water for a long period of time." *Id.* at column 1, lines 8-10. In particular it is a "main object" of Kajisono "to provide an apparatus for purifying and activating

water which may **produce bubbles** capable of being retained in water for a prolonged period of time for purification and activation of water." *Id.* at column 1, lines 42-46 (emphasis added).

Kajisono, however, does not teach, nor suggest, an "agitator connected to a distal end of a drive shaft." Instead, Kajisono discloses a cylindrical capsule used to produce bubbles, but which does not agitate water. For example, Kajisono states the following:

> The capsule 32 is in a form of a **cylinder with a closed bottom** and is attached to the lower end of the drive shaft 30 in a concentric manner therewith. The capsule 32 includes a plurality of small apertures 31 in the circumferential wall thereof. The **apertures 31 allow gas flowing therethrough**.

Id. at column 3, lines 31-36 (emphasis added). As noted above, the capsule is a cylinder having apertures formed therethrough configured to produce bubbles. Kajisono, however, does not teach, nor suggest, any features located on the capsule 32 that would facilitate water agitation. A spinning cylinder submerged in water will not effectively agitate the water. The cylindrical capsule is rotated in order to move air from an upper opening 21, through a hollow drive shaft 30, and into the apertured capsule 32. *See id., e.g.,* at column 1, lines 63-65 ("The drive shaft is also provided at the upper end therefore with an impeller for drawing air into the hollow inside thereof."). In particular,

> The apparatus of the invention operates as follows. When the drive shaft is rotated by the driving means at a high speed, negative pressure is generated in the area adjacent to the lower end of the outer casing. Due to this negative pressure, air is induced or drawn into the hollow inside of the drive shaft and a space between the drive shaft and outer

> casing through the upper opening of the drive shaft and upper opening of the outer casing, respectively. Such air is discharged from the lower opening of the outer casing and the lower opening of the drive shaft and is distributed in water as a large number of small bubbles, i.e., micro-bubbles. The bubble (sic) are very small in diameter so that they may be retained or suspended in water for a long period of time.

Id. at column 2, lines 18-32. In general, Kajisono's objective is to produce bubbles, but not to agitate water. Thus, at least for this reason, Kajisono does not anticipate claims 1 and 27.

In fact, Kajisono discloses a casing positioned over the capsule 32, which would hinder water agitation.

> A protective casing 51 is attached to the lower end of the capsule 32 and encircles the capsule. The protective casing 51 is formed from a mesh material or net in order to avoid the small apertures 31 of the capsule blocked with foreign material or dusts.

Id. at column 4, lines 13-17. Even assuming that the cylindrical capsule could effectively agitate water, the casing 51 (which is fixed to a distal end of a fixed, stationary casing 20 as shown in Figure 3) would block and minimize any water agitation.

While Kajisono does disclose a "propeller 33," this component is not configured to be positioned within water. *See, e.g., id.* at column 3, lines 36-38 ("The drive shaft is provided at the upper opening thereof with a propeller 33 **for inducing air into the passage of the drive shaft 30**.").

In summary, Kajisono does not teach, nor suggest, "an agitator." Thus, the Applicants respectfully submit that Kajisono does not anticipate claim 1, or the claims that depend therefrom.

With respect to claims 2, 3, 15, 16, 28, and 29, the Applicants note that "to anticipate a claim, the reference must teach **every element of the claim**." *See* Manual of Patent Examining Procedure (MPEP) at § 2131 at 2100-73. Kajisono does not teach, nor suggest, a "bird bath," or a "livestock water trough," as recited in these claims. Instead, Kajisono discloses the following:

> The purification and activation apparatus of the invention may be used at a place, such as a contaminated sea, lake or pond, where purification of water should be performed in a floatingly supported manner. The apparatus is particularly suitable for use in a nursery or farm where fishes, shellfishes, or lavers are grown.

Id. at column 2, lines 63-68.

> The apparatus of the invention may also be used in swimming pool, sewage treatment plants, rivers, lakes, lagoons or the like for purification of water. The apparatus of the invention may further be used in order to perform activation, purification and/or softening of drinking water, water for breweries, water in water reservoirs or the like.

Id. at column 6, lines 62-68. Kajisono, however, makes no mention of bird baths or livestock water troughs. Thus, at least for this reason, the Applicants respectfully submit that claims 2, 3, 15, 16, 28, and 29 are not anticipated by Kajisono.

With respect to claims 12, 14, and 25, Kajisono does not teach, nor suggest, a "blade assembly," or a "blade extending from a lateral surface of a drive shaft." As

discussed above, Kajisono teaches a cylindrical capsule 32 having a plurality of apertures formed therethrough. *See id.* at column 3, lines 31-36.

The Office Action cites Kajisono at column 4, lines 40-50 and Figure 7 to support this rejection. The cited passage of Kajisono states the following:

> The drive shaft 30 and capsule 32 may be connected together, for example by means of screw connection. Preferably, the diameter of the capsule is large than that of the drive shaft. This is because, as will be explained in more detail below, the capsule may serve as a kind of propeller to cause negative pressure in the vicinity of the lower end of the outer casing when the drive shaft is rotated at a high speed. Accordingly, it is preferable to provide impellers, as shown in FIG. 7, so as to cause increased negative pressure.

Id. at column 4, lines 40-50.

Neither the passage above, nor Figure 7, however, teach, nor suggest, blades. In fact, Kajisono discusses Figure 7 as follows:

> FIG. 7 is a side view of another embodiment of the invention, illustrating an outer casing and drive shaft employed therein.
>
> Referring to FIG. 7, the drive shaft 30 is provided, in the circumferential surface thereof, with a groove 35 extending helically around the circumferential surface. Provision of the helical groove 35 may increase frictional force between the drive shaft and air to be drawn into the space between the drive shaft and the outer casing. This may result increased amount of static electricity in air to be drawn, thereby facilitating activation of water.

Id. at column 6, lines 17-28. Kajisono does not, however, show or discuss "at least one blade extending from a later surface of a drive shaft," or a "blade assembly" in general with respect to Figure 7. In short, Kajisono simply does not teach, nor suggest, these limitations. As such, the Applicants respectfully submit that Kajisono does not anticipate claims 12, 14 (or is dependent claims), and 25 of the present application, at least for this reason.

The Applicants respectfully submit that the pending claims of the present application should be in condition for allowance at least for the reasons discussed above, and request reconsideration of the claim rejections. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone listed below. Please charge any necessary fees or credit any overpayment to Account No. 13-0017.

Respectfully submitted,

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